IBM

IBM @server storage server

The IBM® @server® storage server combines IBM hardware technology with the Microsoft® Storage Server 2003 product to create an affordable and optimized network-attached file server solution to meet your file storage needs. Additional software is also provided to create a comprehensive storage server product.

The hardware, operating system, and most applications are preinstalled and preconfigured for rapid installation and deployment. The following software products and services are also included with the storage server:
- IBM Director
- IBM ServeRAID™ Manager
- Microsoft Storage Manager 2.0
- File and Print Services for NetWare
- Print services

ServeRAID Manager and File and Print Services for NetWare are not preinstalled; however, the files are on the hard disk. See "Additional products and services" on page 5 for more information.

This document provides the following information:
- "Installing the @server storage server"
- "Using the @server storage server" on page 3
- "Additional products and services" on page 5
- "Recovering the @server storage server" on page 7

Installing the @server storage server

This section provides information about installing and configuring the storage server for the first time. To recover the system if you have a problem that cannot be solved by any other means, see "Recovering the @server storage server" on page 7.

The storage server interface is an HTML-based application. You can access the interface from either a *remote console* or a *local console*. A *remote console* is a system that is not directly attached to the storage server, and it uses a network connection with the Dynamic Host Configuration Protocol (DHCP) or an assigned static IP address to communicate with the storage server. A *local console* consists of a monitor, keyboard, and mouse that are attached directly to the storage server.

A remote console is the default method for accessing the @server storage server interface.

The remote console system must meet the following requirements:
- It must be running a Windows® operating system.
- It must use Microsoft Internet Explorer version 6.0 or later.
- It must be connected to the network that the @server storage server is connected to.

Use one of the following procedures to install the @server storage server.

Installing the @server storage server with a remote console

To install the storage server, complete the following steps:

1. Note the serial number of the server. See the *IBM @server Installation Guide* that comes with the server for the location of the serial number.

2. Unpack and install the server. See the *IBM @server Installation Guide* that comes with the server for installation information.

3. Connect the server to your network or networks.

4. Press the power-control button. Wait 10 to 15 minutes for the @server storage server installation process to be completed.

   Attention: Unexpected results can occur if you turn off the server, press a key, or use the mouse during the initial startup of the server.

5. On the remote console, start Internet Explorer. In the **Address** field, enter `http://ibmxxxxxxx`. (The address `ibmxxxxxxx` is the default system name, where *xxxxxxx* is the serial number of the server.

   A security window opens.

6. Read the security information. If you want to continue, click **Yes**. The "Log on to Windows" window opens.

7. Type the user name and password. The default user name is `administrator`, and the default password is `passw0rd`. The *0* in the default password is a zero. The @server storage server interface is displayed.

Go to "Using the @server storage server" on page 3 for information about using the @server storage server.

Installing the @server storage server with a local console

To install the storage server, complete the following steps:

1. Gather the following information.

Information	Record information	Default value	Comments
System name		IBM*xxxxxxx*	The value *xxxxxxx* is the serial number of the server. See the *IBM @server Installation Guide* that comes with the server for the location of the serial number.
System password		passw0rd	The *0* in the default password is a zero.
Network address		DHCP	
DNS server IP address		Not applicable	If more than one DNS server is used, record the information for each server.
Network interface card (NIC) port	• IP address • Subnet mask • Gateway address	Not applicable	If more than one NIC is used, record the information for each NIC.

2. Unpack and install the server. See the *IBM @server Installation Guide* that comes with the server for installation information.

3. Connect a monitor, keyboard, and mouse to the server.

4. Connect the server to your network or networks.

5. Press the power-control button. Wait 10 to 15 minutes for the @server storage server installation process to be completed. The "Welcome to Windows" window opens.

   Attention: Unexpected results can occur if you turn off the server, press a key, or use the mouse during the initial startup of the server.

6. Press Ctrl+Alt+Delete. The "Log on to Windows" window opens.

7. Type the user name and password. The default user name is `administrator`, and the default password is `passw0rd`. The *0* in the default password is a zero.

8. Click **OK**. The @server storage server interface is displayed.

9. Double-click the **IBM Storage Server** icon. The "Security Alert "window opens. If you want to continue, click **Yes**. The "Connect to localhost" window opens.

10. Type the user name and password. The default user name is `administrator`, and the default password is `passw0rd`.

11. Click **OK**.

12. From the main menu, click the **Network** tab.

13. Click **Interfaces**.

    For information about the settings that you can specify, click **Help**.

14. Type the network settings, IP address, and host name for the @server storage server.

    Notes:
    a. Providing this information enables you to use a remote console at a later time.
    b. Use the information that you gathered in step 1.

15. Click **OK**.

Go to "Using the @server storage server" for information about using the storage server.

Using the @server **storage server**

Use the @server storage server interface for all storage server tasks. This section provides information about the following tasks that you must complete to use the storage server:

1. Start the @server storage server interface.
2. Create data partitions if you are using the storage server for the first time.
3. Learn about the tasks that you can perform using the storage server.

Starting the @server **storage server interface**

Use one of the following procedures to start the @server storage server interface:

- To manage the storage server using a remote console, complete the following steps:

  1. Start Internet Explorer.
  2. In the **Address** field, enter `http://name`.

     For DHCP, *name* is the default system name, in the form IBM*xxxxxxx*, where *xxxxxxx* is the serial number of the storage server. See the *IBM @server Installation Guide* that comes with the server for the location of the serial number.

     For static addresses, *name* is the host name that was assigned to the server.

     The security window opens.
  3. Read the security information. If you want to continue, click **Yes**. The "Welcome to Windows" window opens.
  4. Type the user name and password. The default user name is `administrator`, and the default password is `passw0rd`. The *0* in the default password is a zero. The @server storage server interface is displayed. See the descriptions of storage server tasks on page 4.

- To manage the storage server using a local console, complete the following steps:

  1. Press Ctrl+Alt+Delete. The "Log on to Windows" window opens.
  2. Type the user name and password. The default user name is `administrator`, and the default password is `passw0rd`.
  3. Click **OK**. The Microsoft Storage Server 2003 desktop is displayed.

4. Double-click the **IBM Storage Server** icon. The Security Alert window opens. If you want to continue, click **Yes**. The "Connect to localhost" window opens.

5. Type the user name and password. The default user name is `administrator`, and the default password is `passw0rd`.

6. Click **OK**. The @server storage server interface is displayed. Go to "Creating data partitions."

Creating data partitions

This section provides overview information about creating data partitions. You must configure the data partitions to meet the needs of your enterprise. For more information about data partitions, click **Help** from the @server storage server desktop.

Use the following procedure as an example of how to create a data partition.

Note: This procedure is an example and does not provide specific configuration values. For each window that can be used to specify configuration values, you can either accept the default values or specify different values.

1. From the @server storage server interface, click **Disks**. The "Configure disks" window opens.

2. Click **Volumes**. The "Volumes" window opens.

3. Click **Manage**. The "Log on to Windows" window opens.

4. Type the user name and password. The default user name is `administrator`, and the default password is `passw0rd`.

5. Click **OK**. The "Disk Management" window opens.

6. Click in the unallocated disk space for Disk 1. Diagonal lines are displayed in the selected area.

   Attention: Do not select Disk 0: (IBM_PRELOAD (C:)). Disk 0 is reserved for use only by the @server storage server operating system.

7. Right-click the selected disk space and click **New Partition**. The New Partition wizard opens.

8. Click **Next** and select **Extended partition**.

9. The "Specify Partition Size" window opens.

10. Click **Next**. The "Completing the New Partition" window opens.

11. Click **Finish**. The Unallocated area is highlighted and is now named "Free space."

12. Right-click the Free space area and select **New Logical Drive**. The New Partition Wizard opens.

13. Click **Next**. The "Select Partition Type" window opens.

14. Select **Logical drive** and click **Next**. The "Specify Partition Size" window opens.

15. Click **Next**. The "Assign Drive Letter or Path" window opens.

16. Click **Next**. The "Format Partition" window opens.

17. Click **Next**. The "Completing the New Partition Wizard" window opens.

18. Click **Finish**.

19. The "Disk Management" window opens and the formatting process starts. The percentage of formatting that is complete is displayed. The partition is ready for use when the formatting process is completed.

@server storage server administration tasks

The storage server administration tasks are organized by components. For more information about the component tasks, click **Help** from the @server storage server desktop.

Welcome   The Welcome component provides a tour of the @server storage server interface. You can also use it to perform setup tasks such as setting the administrator password.

Status   The Status component displays the status of @server storage server resources and alerts. You can also use it to add new resources, such as hard disk drives, network interfaces, and shared files.

Network   Use the Network Management component to perform the following tasks:

- Set the fully qualified DNS name for the @server storage server
- Join the @server storage server into a workgroup or domain
- Configure the DNS servers and network interface cards (NICs)
- Change the IP address of the @server storage server
- Change the administrator password

Disks   Use the Disk Management component to manage disks and volumes on the @server storage server and to configure shadow copies.

Users   Use the User Management component to create, delete, and edit properties of local users and groups. This component provides a simple tool for managing small numbers of local users and groups.

> **Note:** If you are working in an Active Directory environment, you must instead use the MMC Active Directory snap-in to manage domain users and groups.

Shares   You can manage the following items using the Share Management component:
- Folders
- Shares
- File-sharing protocols
- Directory quotas
- File screening
- Reports about the @server storage server

Maintenance   Use the Maintenance component to perform maintenance tasks, including setting the system date and time, configuring logs, configuring an uninterruptible power supply, backing up, changing the default language, setting up e-mail alerts, and shutting down.

Help   The Help component provides instructions for using the @server storage server interface.

Additional products and services

The following sections describe the products and services that come with the @server storage server.

All products and applications except ServeRAID Manager and File and Print Services for NetWare are preinstalled. This section includes the procedures to install these applications.

IBM Director Agent

IBM Director is a comprehensive systems-management solution. It provides a powerful suite of tools and utilities to automate many of the processes required to manage systems proactively. For example, you can use it to perform preventive maintenance, diagnostic monitoring, and troubleshooting. An interface provides easy access to both local and remote systems.

IBM Director Agent is started automatically, and it is discovered automatically by a management server (a server on which IBM Director Server is running).

See the IBM Director documentation on the *IBM Director* CD that comes with the @server storage server for more information.

ServeRAID Manager

Use this program to configure arrays and logical drives on the ServeRAID controller. ServeRAID Manager operates in two ways: in startable-CD mode and as an installed program. ServeRAID Manager is not

preinstalled. The files are on the hard disk. To install ServeRAID Manager, double-click the **Install ServeRAID Manager** icon on the @server storage server desktop.

Note: ServeRAID version 7.22 or later is required for the DS300 or DS400 attached disk subsystems. The software is available for download at

    http://www-1.ibm.com/support/docview.wss?rs=1109&uid=psg1MIGR-57078

See the *IBM ServeRAID User's Reference* on the IBM *ServeRAID Support* CD for detailed instructions for using this program.

Microsoft Storage Manager 2.0

Use the Microsoft Storage Manager 2.0 to set directory quotas on @server storage servers and to filter unwanted content; for example, you can prevent users from storing MP3 and JPG files on the storage server. Storage Manager 2.0 also provides an extensive set of storage utilization reports.

File and Print Services for NetWare

The File and Print Services for NetWare function enables the @server storage server to function as a NetWare file and print server. Versions of File and Print Services for NetWare are available for systems that are running on NetWare, Windows, UNIX®, and AppleTalk platforms. Only network-attached printers are supported.

File and Print Services for NetWare is not preinstalled. The files are on the hard disk. To install File and Print Services for NetWare, complete the following steps:

1. From the desktop, right-click **My Network Places**.
2. Click **Properties**.
3. Right-click **Local Area Connection**.
4. Click **Properties**.
5. Click **Install**.
6. Select **Service** and click **Add**.
7. Click **Have Disk**. The Install From Disk window opens.

   Note: If File and Print Services for NetWare is displayed in the Select Network Service list, do not select it. Click **Have Disk** instead. The Install From Disk Window opens.

8. Type c:\fpnw and click **OK**.
9. Select **File and Print Services for NetWare** and click **OK**. The Select Network Service window opens.
10. Type your information in the **Install File and Print Services for NetWare** window. Another Select Network Service window opens.

    For more information, click **Help**.

    Notes:
    a. To avoid restricting user access to File and Print Services for NetWare files and directories, do not create the sysvol folder in the systemroot folder.
    b. If you are installing File and Print Services for NetWare in a domain, specify the password for the File and Print Services for NetWare service account.
    c. If you are installing File and Print Services for NetWare on multiple domain controllers in a domain, you must specify the same password for each account on the domain controllers where it is installed.

11. Shut down and restart the server to complete the installation.

Print services

The @server storage server can be used as a Windows print server. Print services clients are available for systems that are running Windows, UNIX, and AppleTalk platforms. (If File and Print Services for NetWare is installed, NetWare clients are also supported.)

File and Print Services can be used only with network-attached printers.

Recovering the @server storage server

Use the recovery process to restore the @server storage server product to its original default configuration after an unrecoverable system failure has occurred. The recovery process formats the hard disks and reinstalls the operating system, device drivers, and applications.

Attention: Make sure that you have saved all data from the primary partition and all locally attached secondary partitions of the storage server before you perform this procedure.

To recover the @server storage server, complete the following steps:

1. Turn off the @server storage server.
2. Disconnect the server from all external networks, including storage networks such as Fibre Channel.
3. Connect power, a keyboard, a monitor, and a mouse to the @server storage server.
4. Press the power-control button.
5. Make sure that the redundant array of independent disks (RAID) configuration is correct. If you have created new RAID logical drives, the first array must be at least 9 GB, and it must be RAID 1. See the *IBM ServeRAID User's Reference* on the IBM *ServeRAID Support* CD for more information.
6. Insert the *Storage Server Recovery CD* Media 1 into the CD drive. The *Storage Server Recovery CD* automatically starts, and the Recovery Main Menu is displayed.
7. Press Enter to start the recovery process. The terms and conditions are displayed.
8. Read the terms and conditions. Click **Y** if you accept the conditions. The ATTENTION - READ THIS BEFORE YOU CONTINUE screen is displayed.

   Attention: This is the last opportunity to stop the recovery process. All unsaved data will be lost when the recovery process is started.
9. Read the information and click **Y** to start the recovery process. A status window opens during the recovery process.
10. Remove the *Storage Server Recovery CD* Media 1 and insert the *Storage Server Recovery CD* Media 2 into the CD drive when you are prompted.
11. Remove the *Storage Server Recovery CD* Media 2 when you are prompted.
12. Press Enter. The installation process can take up to 1 hour to be completed. The "Log on to Windows" window opens.
13. Type the user name and password. The default user name is `administrator`, and the default password is `passw0rd`.
14. Click **OK**. The @server storage server desktop is displayed.
15. Click **Shut Down**.

    Go to "Installing the @server storage server" on page 1.

IBM @server storage server solution help information

Problem determination for your IBM hardware is provided through IBM Services. See http://www.ibm.com/planetwide/ for support telephone numbers, or in the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

If possible, be at your computer when you call and have the following information ready:

- Machine type and model
- Serial numbers of your IBM hardware products
- Description of the problem
- Exact wording of any error messages
- Hardware and software configuration information

Technical assistance for the IBM @server storage server software is provided through IBM Operational Support Services SupportLine offerings. These fee-based service offerings provide assistance for configuring and installing software. For more information, and support telephone numbers, see http://www.ibm.com/planetwide/.

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